

**Remarks**

This Application has been carefully reviewed in light of the Office Action mailed March 9, 2006. Although Applicants believe all pending claim are allowable over the Examiner's rejections without amendment, Applicants have made clarifying amendments to independent Claims 1, 6, 8, 18-19, 22-23, and 42-43. At least certain of these amendments are not narrowing, and none is considered necessary for patentability. Applicants respectfully request reconsideration and allowance of all pending claims.

**I. The Claims Recite Patentable Subject Matter**

The Examiner rejects Claims 1-19, 22-23, and 26-43 under 35 U.S.C. § 101 as being directed to non-statutory subject matter. Applicants respectfully disagree.

At the outset, it does not appear that the Examiner responded to Applicants' arguments presented in the previous Response (other than to add references to "training requests" throughout the Examiner's argument). Instead, the Examiner simply reiterated substantially verbatim the Examiner's arguments from the previous Office Action. This is improper. "Where the applicant traverses any rejection, the examiner should, if he or she repeats the rejection, take note of the applicant's argument and *answer the substance of it.*" M.P.E.P. § 707.07 (f) (emphasis added). Applicants respectfully submit that simply repeating arguments verbatim from the previous Office Action does not answer the substance of Applicants' arguments. Applicants recognize that the Examiner is undoubtedly responsible for the examination of a large number of applications, placing inordinate constraints on the Examiner's time; however, Applicants cannot be penalized for this fact and are still entitled to a full and complete examination of this Application in compliance with all applicable statutes, regulations, rules, and case law. Applicants respectfully request that the Examiner address each of Applicants' arguments in the next Office Action if the Examiner does not change the rejection or, more appropriately, issue a Notice of Allowance.

The patent laws define patentable subject matter as "any new and useful process, machine, manufacture or composition of matter, or any new and useful improvement thereto." See 35 U.S.C. § 101. When an abstract idea is reduced to a practical application,

the abstract idea no longer stands alone if the practical application of the abstract idea produces a useful, concrete, and tangible result. This then satisfies the requirements of 35 U.S.C. § 101. *See In re Alappat*, 33 F.3d 1526, 1544, 31 U.S.P.Q.2d 1545, 1557 (Fed. Cir. 1994); *see also State Street Bank & Trust Co. v. Signature Financial Group, Inc.*, 149 F.3d 1368, 1373, 47 U.S.P.Q.2d 1596, 1601-02 (Fed. Cir. 1998). While an abstract idea by itself may not satisfy the requirements of 35 U.S.C. § 101, an abstract idea when practically applied to produce a useful, concrete, and tangible result satisfies 35 U.S.C. § 101. *See AT&T Corp. v. Excel Comm. Inc.*, 172 F.3d 1352, 1357, 50 U.S.P.Q. 1447, 1452 (Fed. Cir. 1999) (stating that as technology progressed, the CCPA overturned some of the earlier limiting principles regarding 35 U.S.C. § 101 and announced more expansive principles formulated with computer technology in mind); *see also In re Musgrave*, 431 F.2d 882, 167 U.S.P.Q. 280 (CCPA 1970) (cited by the Federal Circuit in *AT&T Corp.*, 172 F.3d at 1356). Thus, producing a useful, concrete, and tangible result is the key to patentability according to *State Street* and other applicable case law.

“Only when the claim is devoid of any limitation to a practical application in the technological arts should it be rejected under 35 U.S.C. 101.” M.P.E.P. § 2106. Indeed, a method or process remains statutory even if some or all of the steps therein can be performed in the human mind, with the aid of the human mind, or because it may be necessary for one performing the method or process to think. *See In re Musgrave*, 431 F.2d at 893, 167 U.S.P.Q. at 289. As stated by the Federal Circuit in *State Street* and as explicitly confirmed in the M.P.E.P., “[T]ransformation of data, representing discrete dollar amounts, by a machine through a series of mathematical calculations into a final share price, constitutes a practical application of a mathematical algorithm, formula, or calculation, because it produces ‘a useful, concrete, and tangible result’ -- a final share price momentarily fixed for recording and reporting purposes and even accepted and relied upon by regulatory authorities and in subsequent trades.” *State Street*, 149 F.3d at 1373, 47 U.S.P.Q.2d at 1601-02; M.P.E.P. § 2106.

Furthermore, the M.P.E.P. states:

The applicant is in the best position to explain why an invention is believed useful. Office personnel should therefore *focus their efforts* on pointing out *statements made in the specification* that identify all practical applications for the invention. Office personnel should rely on such statements throughout the examination when assessing the invention for compliance with all statutory criteria. An applicant may assert more than one practical application, but only one is necessary to satisfy the utility requirement.

M.P.E.P. § 2106 (*emphasis added*).

Applicants' claims are not merely manipulations of abstract ideas. Instead, each of Applicants' claims clearly recites a useful, concrete, and tangible result, which is all the law requires for a claim to be directed to statutory subject matter, and is therefore directed to patentable subject matter.<sup>1</sup>

For example, independent Claim 1, as amended, recites a "data mining system comprising" the following:

- a client machine; and
- a service broker operable to:
  - receive a consultation request from the client machine through a computer network, the consultation request associated with data for consulting a Neugent, the Neugent being distinct from the client machine;
  - forward the consultation request to the Neugent to invoke a consultation of the Neugent, the Neugent operable to perform a predictive analysis with respect to the data for consulting the Neugent that is associated with the consultation request; and
  - forward to the client machine through the computer network a result object returned by the Neugent, the result object comprising a prediction determined by the Neugent with respect to the data for consulting the Neugent.

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<sup>1</sup> Applicants note that to the extent the Examiner bases any part of this rejection on a "technological arts" requirement, the Board of Patent Appeals and Interferences, in a precedential opinion, recently determined that no "technological arts" requirement exists under 35 U.S.C. § 101. *See Ex Parte Lundgren*, 2004 WL 3561262, \*5, Appeal No. 2003-3088 (Bd. Pat. App. & Int. 2004) (also available at <http://www.uspto.gov/web/offices/dcom/bpai/prec/2003-2088.pdf>) (reversing an examiner's rejection under 35 U.S.C. § 101 and stating that "[o]ur determination is that there is currently no judicially recognized separate 'technological arts' test to determine patent eligible subject matter under § 101" and "we decline to create one").<sup>1</sup> Thus, Applicants respectfully submit that a rejection based on a "technological arts" requirement is or would be improper.

Thus, “forward[ing] to the client through the computer network a result object returned by the Neugent, the result object comprising a prediction determined by the Neugent with respect to the data for consulting the Neugent” is one practical application of independent Claim 1, the useful, concrete, and tangible result being the result object returned by the Neugent that is forwarded to the client through the computer network and that comprises a prediction determined by the Neugent with respect to the data for consulting the Neugent.

Additionally, Applicants’ Specification provides, for example, a discussion of certain deficiencies of some systems:

Data mining is the analysis of large quantities of data in order to extract useful information from the data, such as for making predictions over new data (also called predictive analysis). A number of data mining products are available. However, current commercial products which allow data mining of the wealth of information on the Web require the client application to maintain a predictive model, although a service broker may collect or store raw data and forward it to the client upon demand. Since the client must maintain the predictive model, the resources of the client machine may be overwhelmed when the application is executed.

Specification, Page 2, Line 2 through Page 3, Line 6.

Additionally, with respect to certain embodiments of Applicants’ invention, the Specification provides the following:

- The consultation request, according to one embodiment, includes data for consulting Neugent 13. Specification, Page 9, Lines 8-9.
- According to another embodiment, the consultation request includes identification of a source of data for consulting a Neugent 13. Specification, Page 9, Lines 12-14.
- According to another embodiment, the service broker 15 is a remote server. The consultation request from the client 11 to the remote server may include an Extensible Mark-up Language document. Specification, Page 9, Lines 17-20.
- Neugents technologies include assorted methodologies for recognizing patterns in data and for using those patterns to make predictions on new data. New data is analyzed to determine the pattern into which it falls, thereby providing a prediction of future behavior based on the behavior that has characterized the pattern in the past. Specification, Page 11, Lines 4-10.

- Consult is a process of providing new data to a Neugent (also referred to as data for consulting the Neugent) so that the Neugent uses its model, as developed during training, to provide a prediction from the new data. Specification, Page 14, Lines 17-20.

The Specification also identifies particular advantages that are realized by certain embodiments of Applicants' invention:

Accordingly, the methodologies described in this disclosure place no burden on the client to maintain a predictive model. The complexity of client/server interfaces may be reduced by simplifying protocols and by hiding issues (for example, making them transparent to the user) of platform technology mismatches.

Specification, Page 15, Lines 2-7. Thus, Applicants' specification asserts at least one practical application of certain embodiments of Applicants' invention and identifies the advancement of the technical arts.<sup>2</sup>

For at least these reasons, Applicants respectfully submit that independent Claim 1 (and its dependent claims) recite patentable subject matter. For at least certain analogous reasons, Applicants respectfully submit that independent Claims 18-19 and 42 (and their dependent claims) recite patentable subject matter. Thus, Applicants respectfully request that the Examiner withdraw the rejections of these claims under 35 U.S.C. § 101.

As another example, independent Claim 22, as amended, recites a "method for providing to a remote client machine a service to train a Neugent, comprising" the following:

- receiving a train request from the remote client machine through a computer network, the train request associated with training data for training the Neugent, the Neugent being distinct from the remote client machine;
- forwarding the train request to the Neugent to invoke training of the Neugent, training of the Neugent comprising causing the Neugent to perform a data analysis of the training data; and
- forwarding to the remote client machine through the computer network

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<sup>2</sup> The citations to Applicants' Specification are merely examples intended to illustrate that the Specification discloses at least one practical application of certain embodiments of Applicants' invention. These citations should not be used to limit the scope of Applicants' claims to any particular embodiments.

a training result object returned by the Neugent, the training result object comprising a data classification mechanism operable to facilitate performance of a predictive analysis by the Neugent.

Thus, “forwarding to the remote client machine through the computer network a training result object returned by the Neugent, the training result object comprising a data classification mechanism operable to facilitate performance of a predictive analysis by the Neugent,” is one practical application of independent Claim 22, the useful, concrete, and tangible result being the training result object returned by the Neugent that is forwarded to the remote client machine through the computer network and that comprises a data classification mechanism operable to facilitate performance of a predictive analysis by the Neugent.

Additionally, Applicants respectfully direct the Examiner’s attention to at least the following portions of Applicants’ Specification: Page 2, Line 2 through Page 3, Line 6; Page 9, Line 21 through Page 11, Line 10; Page 14, Lines 9-16; and Page 16, Lines 1-14. Applicants’ specification asserts at least one practical application of certain embodiments of Applicants’ invention and identifies the advancement of the technical arts.<sup>3</sup>

For at least these reasons, Applicants respectfully submit that independent Claim 22 (and its dependent claims) recites patentable subject matter. For at least certain analogous reasons, Applicants respectfully submit that independent Claims 23 and 43 (and their dependent claims) recites patentable subject matter. Thus, Applicants respectfully request that the Examiner withdraw the rejections of these claims under 35 U.S.C. § 101.

## **II. The Claims Comply with 35 U.S.C. § 112, First Paragraph**

The Examiner rejects Claims 1-19, 22-23, and 26-43 under 35 U.S.C. § 112, first paragraph, because, according to the Examiner, “current case law (and accordingly, the MPEP) require such a rejection if a §101 rejection is given because when Applicant has not in fact disclosed the practical application for the invention, as a matter of law there is no way

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<sup>3</sup> As discussed above, the citations to Applicants’ Specification are merely examples intended to illustrate that the Specification discloses at least one practical application of certain embodiments of Applicants’ invention. These citations should not be used to limit the scope of Applicants’ claims to any particular embodiments.

Applicants could have disclosed how to practice the undisclosed practical application.”  
(Office Action at 7) (emphasis omitted)

As Applicants demonstrated above, independent Claims 1, 18-19, 22-23, and 42-43 and thus their dependent claims, recite useful, concrete, and tangible results and are directed to patentable subject matter under 35 U.S.C. § 101. Since the Examiner based the rejection of these claims under 35 U.S.C. § 112, first paragraph, on the rejections of these claims under 35 U.S.C. § 101, Applicants respectfully submit that the rejections under 35 U.S.C. § 112, first paragraph, must be withdrawn. In any event, Applicants respectfully submit that each of Applicants’ claims complies with 35 U.S.C. § 112, first paragraph.

For at least these reasons, Applicants respectfully submit that Claims 1-19, and 22-23, and 26-43 comply with 35 U.S.C. § 112, first paragraph. Thus, Applicants respectfully request that the Examiner withdraw the rejection of these claims under 35 U.S.C. § 112, first paragraph.

### **III. The Claims are Allowable over the Rejections under *Neugents***

The Examiner rejects Claims 1-6, 8-15, 17-19, 22-23, 26-30, 32-39, and 41-43 under 35 U.S.C. § 102(b) as being anticipated by “Neugents Are on The Loose,” The E-Business Adviser, April/May 2000, pp. 1, 8. (the “*Neugents Article*”). Applicants respectfully disagree.

#### **A. Claims 7, 16, 31, and 40**

Applicants assume that if the rejections under 35 U.S.C. §§ 101 and 112 are overcome, dependent Claims 7, 16, 31 and 40 would be allowable if rewritten in independent form because the Examiner did not assert in the Office Action any art rejection against these claims.<sup>4</sup>

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<sup>4</sup> Applicants note that in the first round of prosecution (i.e., prior to the filing of the Request for Continued Examination (RCE)), the Examiner did not assert any art rejections against any of Applicants’ claims.

**B. The Claims are Allowable over the *Neugents Article***

The *Neugents Article* appears to disclose using neugents to replace agents in network management. In particular, the *Neugents Article* discloses performing network management using network agents, which are small programs that reside at network devices, send notifications to a management console, and alert managers of network problems. According to the *Neugents Article*, typical network agents simply notify managers of the network's condition and let the managers make the decisions. The *Neugents Article* then discloses that a new breed of smarter agents called neugents is now available that can learn the normal usage patterns of a network and notify managers proactively. Thus, it is clear from the *Neugents Article* that the neugents disclosed in the article would replace the typical agents at the network devices and communicate notifications to the network manager.

Amended independent Claim 1, which Applicants discuss as an example, recites:

A data mining system comprising:  
a client machine; and  
a service broker operable to:

receive a consultation request from the client machine through  
a computer network, the consultation request associated with data for  
consulting a Neugent, the Neugent being distinct from the client machine;

forward the consultation request to the Neugent to invoke a  
consultation of the Neugent, the Neugent operable to perform a predictive  
analysis with respect to the data for consulting the Neugent that is associated  
with the consultation request; and

forward to the client machine through the computer network a  
result object returned by the Neugent, the result object comprising a prediction  
determined by the Neugent with respect to the data for consulting the  
Neugent.

The *Neugents Article* fails to disclose, teach, or suggest various limitations recited in Applicants' Claim 1. At a minimum, the *Neugents Article* fails to disclose, teach, or suggest a service broker that is operable to: (1) receive a consultation request from the client machine through a computer network, the consultation request associated with data for consulting a Neugent, the Neugent being distinct from the client machine; (2) forward the consultation request to the Neugent to invoke a consultation of the Neugent, the Neugent operable to perform a predictive analysis with respect to the data for consulting the Neugent that is associated with the consultation request; and (3) forward to the client machine through the



computer network a result object returned by the Neugent, the result object comprising a prediction determined by the Neugent with respect to the data for consulting the Neugent, as recited in Claim 1 as amended.

For example, the *Neugents Article* fails to disclose, teach, or suggest a service broker that is operable to “receive a consultation request from the client machine through a computer network, the consultation request associated with data for consulting a Neugent, the Neugent being distinct from the client machine,” as recited in Claim 1 as amended. The Examiner argues that the following statement from the *Neugents Article* discloses these limitations: One technique for handling this type of management is the use of network agents – small programs that reside at network devices, send notifications to a management console and alert managers of network problems. (See Office Action, Page 9) Applicants respectfully disagree.

First, this statement from the *Neugents Article* describes old agent systems and is unrelated to neugents. Thus, it necessarily fails to disclose, teach, or suggest “receiv[ing] a consultation request from the client machine through a computer network, ***the consultation request associated with data for consulting a Neugent, the Neugent being distinct from the client machine,***” as recited in Claim 1. Second, the cited portion of the *Neugents Article* clearly does not disclose, teach, or suggest any request from these network agents that is “associated with data for consulting a Neugent.” Third, the neugents disclosed in the *Neugents Article* are apparently associated with the network devices and communicate to a centralized network manager. To the extent that these network devices are examples of the client machine recited in Claim 1, the neugents disclosed in the *Neugents Article* are not distinct from the network devices. Thus, the *Neugents Article* fails to disclose, teach, or suggest “the Neugent being distinct from the client machine,” as recited in Claim 1 as amended.

As another example, the *Neugents Article* fails to disclose, teach, or suggest a service broker that is operable to “forward the consultation request to the Neugent to invoke a consultation of the Neugent, the Neugent operable to perform a predictive analysis with respect to the data for consulting the Neugent that is associated with the consultation

request,” as recited in Claim 1. The Examiner argues that the following statement from the *Neugents Article* discloses these limitations: Neugents enable companies to warehouse huge, complex data sets, intelligently process information and generate accurate predictions based on that data. (See Office Action, Page 9) Applicants respectfully disagree.

First, the cited portion of the *Neugents Article* merely discloses what neugents are. Second, nowhere does this cited portion disclose, teach, or suggest a service broker (*i.e.*, the service broker that received the consultation request from the client machine through the computer network, the consultation request associated with data for consulting a Neugent) that is operable to “forward the consultation request to the Neugent to invoke a consultation of the Neugent, the Neugent operable to perform a predictive analysis with respect to the data for consulting the Neugent that is associated with the consultation request,” as recited in Claim 1. There simply is no such service broker described in the *Neugents Article*.

As another example, the *Neugents Article* fails to disclose, teach, or suggest a service broker that is operable to “forward to the client machine through the computer network a result object returned by the Neugent, the result object comprising a prediction determined by the Neugent with respect to the data for consulting the Neugent,” as recited in Claim 1. The Examiner argues that the following statement from the *Neugents Article* discloses these limitations: One technique for handling this type of management is the use of network agents – small programs that reside at network devices, send notifications to a management console and alert managers of network problems. (See Office Action, Page 9-10) Applicants respectfully disagree.

First, as discussed above, this statement from the *Neugents Article* describes old agent systems and is unrelated to neugents. Thus, it necessarily fails to disclose, teach, or suggest “forward[ing] to the client machine through the computer network ***a result object returned by the Neugent, the result object comprising a prediction determined by the Neugent with respect to the data for consulting the Neugent,***” as recited in Claim 1. Second, the neugents disclosed in the *Neugents Article* are apparently associated with the network devices and communicate to a centralized network manager. To the extent that these network devices are

examples of the client machine recited in Claim 1, the neugents disclosed in the *Neugents Article* are not distinct from the network devices. The neugents of the *Neugents Article* may perform some processing and then send notifications to the network manager. Thus, the *Neugents Article* fails to disclose, teach, or suggest “forward[ing] *to the client machine* through the computer network *a result object returned by the Neugent*, the result object comprising a prediction determined by the Neugent with respect to the data for consulting the Neugent,” as recited in Claim 1.

Last, Applicants note that the Examiner’s citation is the exact same citation the Examiner argued allegedly discloses a service broker that is operable to “receive a consultation request from the client machine through a computer network, the consultation request associated with data for consulting a Neugent, the Neugent being distinct from the client machine,” as recited in Claim 1 as amended. Certainly, this cited portion does not disclose, teach, or suggest any service broker that both “receive[s] a consultation request from the client machine through a computer network, the consultation request associated with data for consulting a Neugent, the Neugent being distinct from the client machine” and “forward[s] to the client machine through the computer network a result object returned by the Neugent, the result object comprising a prediction determined by the Neugent with respect to the data for consulting the Neugent,” as recited in Claim 1.

For at least these reasons, Applicants respectfully request reconsideration and allowance of independent Claims 1 and its dependent claims.

For at least certain analogous reasons, Applicants respectfully request reconsideration and allowance of independent Claims 18-19, 22-23, and 42-43 and their dependent claims. For example, with respect to independent Claims 22-23 and 43, these claims are directed to a “train request” rather than a “consultation request” and are allowable for at least certain analogous reasons to those discussed above with respect to Claim 1.

**IV. No Waiver**

All of Applicants' arguments and amendments are without prejudice or disclaimer. Additionally, Applicants have merely discussed example distinctions from the references cited by the Examiner. Other distinctions may exist, and Applicants reserve the right to discuss these additional distinctions in a later Response or on Appeal, if appropriate. By not responding to additional statements made by the Examiner, Applicants do not acquiesce to the Examiner's additional statements. The example distinctions discussed by Applicants are sufficient to overcome the Examiner's rejections.

**Conclusion**

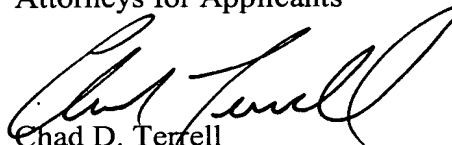
Applicants have made an earnest attempt to place this case in condition for allowance. For at least the foregoing reasons, Applicants respectfully request full allowance of all pending claims.

If the Examiner feels that a telephone conference would advance prosecution of this Application in any manner, the Examiner is invited to contact Chad D. Terrell, Attorney for Applicants, at the Examiner's convenience at (214) 953-6813.

Although no fees are believed due at this time, the Commissioner is hereby authorized to charge any fees or credit any overpayments to Deposit Account No. 02-0384 of Baker Botts L.L.P.

Respectfully submitted,

BAKER BOTTS L.L.P.  
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